

Job Hazard Analysis (JHA)

A Job Hazard Analysis (JHA) is a systematic process used to identify, assess, and control potential hazards associated with a specific job or task. By breaking down each step of a job, a JHA helps prevent accidents and injuries by proactively addressing risks before work begins. This comprehensive guide provides detailed instructions and best practices for developing and implementing a JHA within the client and NCC T&D HSE management system.

Key Definitions

- **Job Hazard Analysis (JHA):**

A process that dissects a job into its basic steps, identifies potential hazards at each step, and determines the most effective preventive measures.

- **Hazard:**

Any condition or object that has the potential to cause harm to people, damage an asset or environment/workplaces.

- **Risk:**

The likelihood and severity of harm that could result from exposure to a hazard.

- **Control Measures:**

Methods implemented to eliminate or reduce the risk associated with a hazard. These include engineering controls, administrative procedures, and personal protective equipment (PPE).

JHA vs. HIRA: An Overview

Job Hazard Analysis (JHA)

- **Purpose:** Focuses on a specific job or task by breaking it down into individual steps.
- **Approach:** Examines each step to identify hazards and then determines the control measures necessary for that specific activity.
- **Scope:** Typically used for routine or high-risk jobs where a detailed, step-by-step analysis is needed to protect workers.

Hazard Identification and Risk Assessment (HIRA)

- **Purpose:** Evaluates hazards on a broader scale—covering processes, systems, or entire work areas.
- **Approach:** Identifies all potential hazards, assesses the risks associated with them using tools like risk matrices, and prioritizes which hazards need more robust control measures.
- **Scope:** Used to capture a wide range of hazards in various contexts, from overall operations to specific environmental or chemical hazards.

Key Difference:

While JHA is very detailed and job-specific (breaking down a task step by step), HIRA is broader and more strategic, often forming part of an organization's or a project overall risk management system.

JHA Purpose and Importance

- **Enhance Safety:**

Identify potential hazards early to implement effective control measures, reducing the risk of incidents and injuries.

- **Improve Work Processes:**

Streamline tasks by understanding hazards and integrating safe work procedures, ultimately boosting productivity.

- **Compliance:**

Ensure that all work activities adhere to the NCC T&D HSE management system and client safety requirements.

- **Employee Engagement:**

Involve workers in safety planning, fostering a proactive safety culture and continuous improvement.

JHA Process Steps

Step 1: Task Identification and Breakdown

- **Select the Job:**

Identify jobs or tasks with a history of incidents, high-risk activities, or those that are new to the organization.

- **Break Down the Job:**

Divide the selected job into its fundamental steps or tasks. Each step should be simple enough to analyze for hazards effectively.

- **Document the Process:**

Create a detailed flowchart or list that outlines each step in sequential order. This documentation will serve as the basis for the analysis.

Step 2: Hazard Identification

- **Identify Hazards:**

For each step, examine the task to pinpoint potential hazards. Consider physical, chemical, biological, ergonomic, and environmental risks.

- **Gather Input:**

Consult workers, supervisors, and subject matter experts to ensure all potential hazards are identified. Use historical data and incident reports to support your analysis.

- **Consider All Conditions:**

Analyze hazards under different conditions, including normal operation, abnormal situations, and emergency scenarios.

Step 3: Risk Assessment

- **Evaluate the Risk:**

For each identified hazard, assess the likelihood of occurrence and the severity of potential injuries or damage.

- **Prioritize Hazards:**

Rank the hazards based on the risk assessment to determine which require immediate attention and control measures.

- **Use a Risk Matrix:**

Utilize a risk matrix to categorize hazards, helping to decide on the appropriate level of controls.

Step 4: Identify and Implement Control Measures

- **Elimination:**

Whenever possible, remove the hazard entirely from the work process.

- **Substitution:**

Replace hazardous processes or materials with less hazardous alternatives.

- **Engineering Controls:**

Introduce physical changes to the workplace, such as guarding, ventilation systems, or automation, to reduce exposure to hazards.

- **Administrative Controls:**

Develop procedures, training, and work practices that minimize risks. These may include job rotation, scheduling, or establishing safe work protocols.

- **Personal Protective Equipment (PPE):**

Provide appropriate PPE to protect workers when hazards cannot be fully eliminated.



- **Document Controls:**

Clearly document each control measure linked to the specific hazards, ensuring that the implemented measures are communicated to all relevant personnel.

Step 5: Implementation and Training

- **Develop Work Instructions:**

Incorporate the JHA findings into clear, step-by-step work instructions and safe work procedures.

- **Training:**

Conduct comprehensive training sessions to ensure all workers understand the hazards and the control measures established. Reinforce the importance of adhering to these procedures.

- **Communication:**

Share the completed JHA with all stakeholders, including project leaders, supervisors, and workers. Ensure that the information is accessible and understandable.

Step 6: Monitoring, Review, and Continuous Improvement

- **Regular Inspections:**

Periodically inspect the work environment to ensure that control measures remain effective and are being followed.

- **Review and Update:**

Revisit the JHA whenever there are changes to the job, new equipment is introduced, or following an incident. Update the analysis to reflect current conditions and new information.

- **Employee Feedback:**

Encourage workers to provide feedback on the effectiveness of the JHA and suggest improvements. Use this feedback to refine and enhance the process continually.

- **Documentation and Recordkeeping:**

Maintain detailed records of the JHA process, including risk assessments, training sessions, control measures, and review updates. These records are critical for accountability and future audits.

Roles and Responsibilities

Project Leaders

- Oversee the development and implementation of the JHA for all high-risk jobs.
- Ensure that the JHA is integrated with the overall HSE management system.
- Monitor compliance with established safety procedures.

Supervisors

- Conduct daily briefings on the JHA for their teams.
- Ensure that all control measures are in place and that workers are using them correctly.
- Report any deviations or hazards observed during the job.

Workers

- Follow the established JHA and use all required control measures and PPE.
- Actively participate in training sessions and provide feedback on safety procedures.
- Report any new hazards or incidents promptly.

HSE Department

- Facilitate the training and dissemination of JHA procedures.
- Support the review and update process with technical expertise and industry best practices.
- Audit the JHA process regularly to ensure continuous improvement and compliance.



Key Takeaways

- **Systematic Approach:**

A detailed JHA systematically identifies hazards, assesses risks, and implements targeted control measures to protect workers.

- **Integration and Communication:**

Incorporate the JHA into work procedures and maintain clear communication among all stakeholders for effective hazard management.

- **Continuous Improvement:**

Regular monitoring, review, and employee engagement are essential for keeping the JHA relevant and effective.

- **Documentation:**

Comprehensive recordkeeping supports ongoing safety efforts and ensures compliance with the client and NCC T&D HSE management system.

For further details or expert guidance, please refer to NCC T&D's relevant IMS procedures or consult our HSE Department.

